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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/713,342	Applicant(s) DRISSI ET AL.	
	Examiner Wilbert L. Starks, Jr.	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 101

35 U.S.C. §101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The invention as disclosed in claims 1-23 is directed to non-statutory subject matter. Claims 1, 8, and 13 are not claimed to be practiced on a computer. It is clear that these claims are not limited to practice in the technological arts. On that basis alone, those claims are clearly nonstatutory.

Regardless of whether the claims are in the technological arts, none of the claims in the case is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

> "taking several abstract ideas and manipulating them together adds nothing to the basic equation." *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicant's classified "data" are just such abstract ideas.

Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the

same line of cases as the *Alappat-State Street Bank* decisions and is in complete agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

> "Today we hold that *the transformation of data, representing* ***discrete dollar amounts****, by a machine through a series of mathematical calculations into a final share price*, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result" -- *a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.*" (emphasis added) *State Street Bank* at 1601.

True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se statutory*. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, **representing discrete dollar amounts**, by a machine through a series of mathematical calculations into a final share price..."

The court was being very specific.

Additionally, the court was also careful to specify that the useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording purposes and even accepted and **relied upon by regulatory authorities and in subsequent trades**."

Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

> "**the dispositive issue** for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond **simply manipulating 'abstract ideas' or 'natural phenomena'** ... As the Supreme Court has made clear, '[a]n idea of itself is not patentable, ... *taking several abstract ideas and manipulating them together adds nothing to the basic equation.*" In re Warmerdam 31 USPQ2d at 1759 (emphasis added).

In the present case, the Examiner finds that Applicant manipulated a set of abstract "input data" to solve mathematical problems in the **abstract**. Under *Warmerdam*, the result of such manipulations is not statutory.

Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of "useful, concrete, and tangible" the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a "useful, concrete and tangible result". There is only manipulation of abstract ideas.

The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The court noted that:

> "Finally, the decision in *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) is not to the contrary. *** The court found that the claimed process did nothing more than **manipulate basic mathematical constructs** and concluded that '*taking several abstract ideas and manipulating them together adds nothing to the basic equation*'; *hence*, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court's conclusion on the facts, the holding of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101."(emphasis added) *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

The fact that the invention is merely the manipulation of *abstract ideas* is indisputable. The object referred to by Applicant's abstract word "data" is simply a mathematical/logical construct in the abstract. Consequently, the necessary conclusion under *AT&T , State Street* and *Warmerdam,* is straightforward and clear. The claims take several abstract ideas (i.e., a range of data points in the abstract) and manipulate them together adding nothing to the basic equation. Claims 1-6 are rejected under 35 U.S.C. §101.

Regarding the "system" and "computer readable medium" recitals in claims 16-22 and 23, the invention is still found to be nonstatutory. Any other finding would be at variance with current case law. Specifically, the Federal Circuit held in *AT&T v. Excel*, 50 USPQ2d 1447 (Fed. Cir. 1999) held that:

> "Whether stated implicitly or explicitly, we consider the scope of Section 101 to be **the same regardless of the form** -- machine or process -- in which a particular claim is drafted." *AT&T v. Excel*, 50 USPQ2d 1447, 1452 citing *In re Alappat*, 33 F.3d at 1581, 31 USPQ2d at 1589 (Rader, J., concurring)

Examiner considers the scope of Section 101 to be the same regardless of whether Applicant *claims* a "process," "machine," or "product of manufacture". While claims 22 and 23 are drawn to "products of manufacture", they are insufficient by themselves to limit the claims to statutory subject matter. Examiner's position is clearly consistent with *Alappat,* and *AT&T* and is implicitly consistent with *Warmerdam* and *State Street*. Accordingly, those claims are properly rejected.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 8, 9, 21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipate by McAulay, A.D.; Oh, J.C.; *Improved learning in genetic rule-based classifier systems*, Systems, Man, and Cybernetics, 1991. 'Decision Aiding for Complex Systems, Conference Proceedings., 1991 IEEE International Conference on, 13-16 Oct. 1991, Page(s): 1393 -1398 vol. 2.

Claim 8

Claim 8's "classifying objects in a plurality of domain datasets using one of a number of data classification models, each of said data classification models having a corresponding bias;" is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 8's "evaluating the performance of each of said domain dataset classifications;" is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 8's "maintaining a performance value for each combination of said domain datasets and said bias;" is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 8's "processing said performance values for each combination of said domain datasets and said bias to generate one or more rules, each of said rules specifying one or more characteristics of said domain datasets and a corresponding bias that should be utilized in one of said data classification models; and" is taught by McAulay, A.D., Figure 1, lines 10-11.

Claim 8's "selecting a data classification model for classifying a domain dataset by comparing characteristics of said domain dataset to said rules." is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 9

Claim 9's "The method of claim 8, further comprising the step of modifying at least one of said biases based on said performance evaluation." is taught by McAulay, A.D., Figure 1, lines 10-11.

Claim 21

Claim 21's "a memory that stores computer-readable code; and" is anticipated by McAulay, A.D., Figure 1, lines 10-11.

Claim 21's "a processor operatively coupled to said memory, said processor configured to implement said computerreadable code, said computer-readable code configured to:" is anticipated by McAulay, A.D., Figure 1.

Claim 21's "classify objects in a plurality of domain datasets using one of a number of data classification models, each of said data classification models having a corresponding bias;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 21's "evaluate the performance of each of said domain dataset classifications;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 21's "maintaining a performance value for each combination of said domain datasets and said bias;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 21's "process said performance values for each combination of said domain datasets and said bias to generate one or more rules, each of said rules specifying one or more characteristics of said domain datasets and a corresponding bias that should be utilized in one of said data classification models; and" is anticipated by McAulay, A.D., Figure 1, lines 10-11.

Claim 21's "select a data classification model for classifying a domain dataset by comparing characteristics of said domain dataset to said rules." is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 23

Claim 23's "a step to classify objects in a plurality of domain datasets using one of a number of data classification models, each of said data classification models having a corresponding bias;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 23's "a step to evaluate the performance of each of said domain dataset classifications;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 23's "a step to maintaining a performance value for each combination of said domain datasets and said bias;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 23's "a step to process said performance values for each combination of said domain datasets and said bias to generate one or more rules, each of said rules specifying one or more characteristics of said domain datasets and a corresponding

bias that should be utilized in one of said data classification models; and" is anticipated by McAulay, A.D., Figure 1, lines 10-11.

Claim 23's "a step to select a data classification model for classifying a domain dataset by comparing characteristics of said domain dataset to said rules." is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-23 are rejected under 35 U.S.C. §103(a) as being unpatentable over McAulay, A.D.; Oh, J.C.; *Improved learning in genetic rule-based classifier systems*, Systems, Man, and Cybernetics, 1991. 'Decision Aiding for Complex Systems, Conference Proceedings., 1991 IEEE International Conference on, 13-16 Oct. 1991, Page(s): 1393 - 1398 vol. 2 in view of Lewis, David D., *An Evaluation of Phrasal and Clustered Representations on a Text Categorization Task*, Proceedings of the 15th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, June 1992, pp. 37-50.

Claim 1

Claim 1's "classifying objects in a domain dataset using one or more data classification models, each of said one or more data classification models having a bias;" is taught by McAulay, A.D., Figure 1, lines 2-3.

Claim 1's "evaluating the performance of said classifying step; and" is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 1's "modifying said bias based on said performance evaluation." is taught by McAulay, A.D., Figure 1, lines 10-11.

McAulay, A.D. et al does not disclose claim 1's "selecting at least one or more data classification models based on a meta-feature that characterizes said domain data set" Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 1.

Claim 2

Claim 2's "The method of claim 1, wherein said steps of classifying and evaluating are performed for a plurality of said domain datasets and wherein said method further comprising the steps of recording a performance value for each

combination of said domain datasets and said bias." is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 3

Claim 3's "The method of claim 2, further comprising the step of processing said recorded performance values for each combination of said domain datasets and said bias to generate one or more rules, each of said rules specifying one or more characteristics of said domain datasets and a corresponding bias that should be utilized in one of said data classification models." is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 4

Claim 4's "The method of claim 3, further comprising the step of selecting a data classification model for classifying a domain dataset by comparing characteristics of said domain dataset to said rules." is taught by McAulay, A.D., p. 1393, third paragraph, first three lines of the paragraph.

Claim 5

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 5's "The method of claim 1, wherein said domain dataset is represented using a set of meta-features." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 5.

Claim 6

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 6's "The method of claim 5, wherein said meta-features includes a concept variation meta-feature." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 6.

Claim 7

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 7's "The method of claim 5, wherein said meta-features includes an

average weighted distance meta-feature that measures the density of the distribution of said at least one domain dataset." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 7.

Claim 10

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 10's "The method of claim 8, wherein said domain dataset is represented using a set of meta-features." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 10.

Claim 11

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 11's "The method of claim 10, wherein said meta-features includes a concept variation meta-feature." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 11.

Claim 12

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 12's "The method of claim 10, wherein said meta-features includes an average weighted distance meta-feature that measures the density of the distribution of said at least one domain dataset." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay,

Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 12.

Claim 13

Claim 13's "classifying objects in said domain dataset using said selected data classification model;" is anticipated by McAulay, A.D., p. 1393, third paragraph, first three lines of the paragraph.

Claim 13's "evaluating the performance of said classifying step;" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 13's "maintaining an indication of said performance of said model for said domain dataset; repeating said applying, classifying and evaluating steps for a plurality of said domain datasets; and" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 13's "processing said performance values for each combination of said domain datasets and said bias to adjust one or more rules for subsequent data classification, each of said rules specifying one or more characteristics of said domain datasets and a corresponding bias that should be utilized in one of said data classification models." is anticipated by McAulay, A.D., Figure 1, lines 10-11.

McAulay, A.D. et al does not disclose claim 13's"applying an adaptive learning algorithm to said domain dataset to select a data classification model based on a meta-feature that characterizes said domain data set, said data classification model having a bias;" Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 13.

Claim 14

Claim 14's "The method of claim 13, further comprising the step of selecting a data classification model for classifying a domain dataset by comparing characteristics of said domain dataset to said rules." is taught by McAulay, A.D., p. 1393, third paragraph, first three lines of the paragraph.

Claim 15

Claim 15's "The method of claim 13, further comprising the step of modifying at least one of said biases based on said performance evaluation." is taught by McAulay, A.D., Figure 1, lines 10-11.

Claim 16

Claim 16's "a memory that stores computer-readable code; and" is anticipated by McAulay, A.D., Figure 1.

Claim 16's "a processor operatively coupled to said memory, said processor configured to implement said computer-readable code, said computer-readable code configured to:" is anticipated by McAulay, A.D., Figure 1.

Claim 16's "classify objects in a domain dataset using one or more data classification models, each of said one or more data classification models having a bias;" is anticipated by McAulay, A.D., Figure 1, lines 10-11.

Claim 16's "evaluate the performance of said classifying step; and" is anticipated by McAulay, A.D., Figure 1, lines 4-5.

Claim 16's "modify said bias based on said performance evaluation." is anticipated by McAulay, A.D., Figure 1, lines 10-11.

McAulay, A.D. et al does not disclose claim 16's"selecting at least one of said one or more data classification models based on a meta-feature that characterizes said domain data set;" Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 16.

Claim 17

Claim 17's "The system of claim 16, wherein said processor is further configured to classify said objects and evaluate said performance for a plurality of said domain datasets and wherein said processor records a performance value for each combination of said domain datasets and said bias." is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 18

Claim 18's "The system of claim 17, wherein said processor is further configured to process said recorded performance values for each combination of said domain datasets and said bias to generate one or more rules, each of said rules specifying one or more characteristics of said domain datasets and a corresponding bias that should be utilized in one of said data classification models." is taught by McAulay, A.D., Figure 1, lines 10-11.

Claim 19

Claim 19's "The system of claim 18, wherein said processor is further configured to select a data classification model for classifying a domain dataset by comparing characteristics of said domain dataset to said rules." is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 20

McAulay, A.D. et al shows the use of a genetic rule-based classifier but does not disclose claim 20's "The system of claim 16, wherein said domain dataset is represented using a set of meta-features." Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 20.

Claim 22

Claim 22's "a step to classify objects in a domain dataset using one or more data classification models, each of said one or more data classification models having a bias;" is taught by McAulay, A.D., Figure 1, lines 10-11.

Claim 22's "a step to evaluate the performance of said classifying step; and" is taught by McAulay, A.D., Figure 1, lines 4-5.

Claim 22's "a step to modify said bias based on said performance valuation." is taught by McAulay, A.D., Figure 1, lines 10-11.

McAulay, A.D. et al does not disclose claim 22's"selecting at least one of said one or more data classification models based on a meta-feature that characterizes said

domain data set;" Lewis, David D., however does show a classifier using "meta-features".

Motivation – The claimed meta-features would have been a highly desirable feature in the art due to its ability to improve text retrieval effectiveness and Lewis, David D. recognizes that the text retrieval effectiveness would be improved if the meta-features of Lewis David D. were substituted for the standard feature sets of McAulay, Alastair, D. Therefore, it would have been obvious to one of ordinary skill in the art to combine Lewis with McAulay to obtain the invention as specified in claim 22.

Response to Arguments

2. Applicant's arguments filed 15 March 2004 have been fully considered but they are not persuasive. Specifically, Applicant argues that:

A. That the act of "classifying data" is enough to put the claims in the "technological arts".

B. That "classifying data" is a practical application of the algorithm.

Examiner disagrees. The term "technological arts" is a term of art in 101 doctrine to signify that an algorithm is practiced on a computer. This is in addition to the "useful, concrete, and tangible" standard held in State Street Bank. The holding in that case did not disturb the requirement that such inventions be in the "technological arts" (i.e.,

practiced on a computer.) State Street Bank only clarified the change from the Freeman-Walker-Abele test that occurred in In re Alappat. Applicant's invention is a bare algorithm without any limitation of its practice to a computer. Similarly, I can think of classifying the alphabet (data) into upper and lower case letters (classification). This act of classification is not in the technological arts because it is not limited to practice on a computer...it is merely thought. Applicant's claimed invention encompasses pure thought as well and, therefore, is not limited to practice on a computer and is not limited to practice in the technological arts.

Regarding the idea that "classifying data" is enough to limit the claims to a practical application...Examiner suggests a thorough reading of the Warmerdam case cited in the previous action. That case is still good law and is the way that the Federal Circuit believes cases should be rejected.

Applicant quotes certain Supreme Court cases as if they are authority that support a contrary opinion. In fact Supreme Court precedent is much more strict regarding 101 doctrines than the Federal Circuit's precedents are. For example, if Applicant were to claim a "process", the Supreme Court has always held that:

"A [statutory] process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.... The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence." See *Diamond v.*

Diehr, 450 U.S. at 183-84, 209 USPQ at 6 (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1877)).

Applicant's claims don't even come close to meeting this standard. Note that the Federal Circuit is much more lenient than this in its *In re Warmerdam* case. Applicant didn't directly address the holding in that case to shift the burden of proof; Applicant has not made any argument that is at all persuasive to relieve the application of the *Warmerdam* precedent to this case. On that basis, all the 101 rejections stand as proper.

Applicant is again reminded to make a thorough reading of the *In re Warmerdam* case with a view toward understanding Examiner's rejections of these claims. That case is the foundation of the rejections made in this case. Examiner uses Federal Circuit cases because they give Applicant the greatest benefit of the doubt. If that standard is not met by Applicant, Examiner is confident that his decision will stand at all levels of review.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (703) 305-0027.

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Alternatively, inquiries may be directed to the following:

S. P. E. Anthony Knight	**(703) 308-3179**
After-final (FAX)	**(703) 746-7238**
Official (FAX)	**(703) 746-7239**
Non-Official/Draft (FAX)	**(703) 746-7240**

WLS

19 June 2004

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Primary Examiner
Art Unit - 2121